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InterACTIV: An Exploratory Study of the Use of a Game Console to Promote Physical Activation of Hospitalized Adult Patients With Cancer

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The positive influence of physical exercise on patient-reported outcomes (i.e., symptoms, function, or quality of life) in patients with cancer is well established (Knols, Aaronson, Uebelhart, Fransen, & Aufdemkampe, 2005; Schmitz et al., 2005). However, motivating patients to adhere to physical exercise plans remains challenging (Baumann, Schüle, Kraut, & Fauser, 2005). In addition, behavioral therapy measures are used to minimize psychosomatic reactions in patients with cancer during radiotherapy and chemotherapy (Burish, Carey, Krozely, & Greco, 1987; Kolko & Rickard-Figueroa, 1985; Redd et al., 1987). However, computer games have been used sporadically for the management of side effects. Vasterling, Jenkins, Tope, and Burish (1993) showed that, in addition to increasing imagination and relaxation, simple cognitive distractions created by computer games are effective in reducing side effects from chemotherapy. Schneider and Hood (2007) also showed that virtual realities in computer games are effective in distracting patients during chemotherapy application. Diminished sense of time is achieved irrespective of sex, age, or playing frequency (Wood, Griffiths, & Parke, 2007). The feeling of a loss of time was dependent on the quality of the computer game, its complexity, game levels, and structure. The experience had a positive impact on players' state of relaxation and stimulated a temporary escape from reality. Players used computer and video games as alternative coping methods (Wood & Griffiths, 2007). For patients in burdensome situations, video games could support coping and thus reduce side effects of radiotherapy and chemotherapy (Kato, Cole, Bradlyn, & Pollock, 2008).

Purpose/Objectives: To explore the application of the Nintendo Wii™ game console to motivate hospitalized adult patients with cancer to be physically active during treatment periods.

Design: An exploratory study with a mixed-method approach, including descriptive statistics and Mayring's qualitative data evaluation method.

Setting: The Department of Radiation Oncology at the University Hospital in Halle (Saale) in Germany.

Sample: Convenience sample of 7 adult inpatients.

Methods: All patients received physical training for five days for 30 minutes per day with Nintendo Wii. After the last training session, patients were interviewed using a semistructured guideline.

Main Research Variables: Applicability of a motion-activated game console during inpatient treatment periods, patients' distraction from the hospital environment.

Findings: In general, the use of a motion-activated game console in a hospital environment was evaluated positively. Participants showed a high degree of acceptance using this kind of physical activity. Because of the Nintendo Wii, the majority of individuals felt stimulated to become physically active during hospitalization. In addition, all patients lost time awareness and felt distracted from the daily hospital routine. A majority of the patients reported an improved mood state from the game sessions.

Conclusions: The results indicate that a motion-activated game console could be useful to motivate adult patients with cancer to be physically active during hospitalization.

Implications for Nursing: Nurses can recommend the use of game consoles such as the Nintendo Wii for physical exercise; in addition, the motivational effects of playing motion-activated game consoles might be particularly helpful for patients with cancer-related fatigue to overcome barriers and begin exercise.